

International Paper Corporation)
Androscoggin County)
Auburn, Maine)
A-461-71-H-A)

Departmental
Findings of Fact and Order
Air Emission License
Amendment #3

After review of the air emission license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. International Paper Corporation (IP) of Auburn, Maine was issued Air Emission License A-461-71-D-T/R on February 29, 2000, permitting the operation of emission sources associated with their corrugated container manufacturing facility. The license was subsequently amended on November 7, 2000 (A-461-71-F-M) and May 20, 2002 (A-461-71-G-M).
2. IP has requested an amendment to their license in order to:
 - replace Boiler #2 with a newer, larger boiler designated Boiler #3;
 - license Boiler #1 to fire #2 fuel oil; and,
 - increase the facility fuel limits to 500,000 gal/year of fuel oil, and 500×10^6 scf of natural gas.

B. Emission Equipment

IP is proposing to remove Boiler #2 and replace it with the following equipment:

New Equipment

<u>Equipment</u>	<u>Max. Capacity (MMBtu/hr)</u>	<u>Max. Firing Rate</u>	<u>Fuel type, % sulfur</u>	<u>Stack</u>
Boiler #3	20.9	149.4 gal/hr	#2, 0.35%	2
		139.5 gal/hr	#4, #6, 0.5%	
		20,925 scf/hr	natural gas	

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as given in Maine's Air Regulations. This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Boiler #3

IP is proposing to install Boiler #3, which was manufactured in 2003 with a maximum capacity of 20.9 MMBtu/hr. Boiler #3 will be licensed to fire residual oil (#6 or #4 fuel oil), distillate oil (#2 fuel oil) and natural gas. Boiler #3 is subject to New Source Performance Standards (NSPS) 40 CFR 60 Subpart Dc.

40 CFR 60 Subpart Dc requires IP to fire fuel oil with a maximum sulfur content of 0.5% by weight. Additionally, BACT for the boiler requires that the #2 fuel oil fired in the boiler not exceed a sulfur content of 0.35% by weight.

Compliance with the sulfur content limits shall be demonstrated by fuel oil sample analysis performed on the initial tank of oil to be fired in Boiler #3. After the initial fuel oil certification, IP shall document the sulfur content of each oil shipment received, according to the NSPS requirements.

Previously licensed Boiler #1 and the proposed Boiler #3 will share one oil storage tank. IP therefore accepts a facility wide limit of 0.5% sulfur by weight, for residual oil, and 0.35% sulfur by weight, for distillate oil, to show compliance with the fuel sulfur content as required by NSPS and BACT for Boiler #3. These sulfur content requirements will be effective following the installation of Boiler #3.

Boiler #1 will be licensed to fire #2 fuel oil with the start-up of Boiler #3. This is a cleaner burning fuel than the #6 or #4 fuel oil which the boiler is already licensed to fire, thus it represents BPT for the Boiler #1.

BACT for Boiler #3 is the following:

1. The firing of #6, #4, or #2 fuel oil or natural gas. The sulfur content of the residual fuel oil shall not exceed 0.5% by weight. The sulfur content of the distillate oil shall not exceed 0.35% by weight.
2. MEDEP Chapter 103 regulated PM limits for fuel oil combustion. Natural gas combustion PM limits based on AP-42 data. PM₁₀ emission limits derived from the PM rates.
3. NO_x, CO and VOC emissions from the firing of fuel oil based on manufacturer's data.
4. SO₂, NO_x, CO and VOC emissions from the firing of natural gas based on manufacturer's data.
5. Visible emissions from Boiler #3 (stack 2) combusting fuel oil shall not exceed 30% opacity on a 6 minute block average, except for no more than 2 six minute block averages in a 3 hour period.
6. Visible emissions from Boiler #3 (stack 2) combusting natural gas shall not exceed 10% on a six-minute block average basis.

C. Annual Emission Restrictions

IP Auburn shall not exceed the following emission limits. Annual emissions are calculated based on 500,000 gallons of #6 fuel oil, with a sulfur content of 0.5% by weight and 500 MMScf/year of natural gas fired in Boiler #3.

Pollutant	Fuel Oil	Natural Gas	Process	Total TPY
PM	4.5	12.8	--	17.3
PM ₁₀	4.5	12.8	--	17.3
SO ₂	19.7	0.26	--	19.96
NO _x	18.8	20.4	--	39.2
CO	2.8	38.3	--	41.1
VOC	1.3	4.1	17.9	23.3

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a modification shall be determined on a case-by-case basis. Based on the total facility emissions, IP Auburn is below the emissions level required for modeling and monitoring.

ORDER

The Department hereby grants Air Emission License Minor Revision A-461-71-H-A, subject to the conditions found in Air Emission License A-461-71-D-T/R, and in amendments A-461-71-F-M and A-461-71-G-M, and the following conditions:

The following replaces Condition (16) of License A-461-71-D-T/R:

- (16) Boiler #3 shall fire #6 and #4 fuel oil with a maximum sulfur content not to exceed 0.5% by weight, #2 fuel oil with a maximum sulfur content not to exceed 0.35% by weight, and natural gas. Boiler #1 is currently licensed to fire #6 and #4 fuel oil, with a maximum sulfur content of 1.5% by weight. Boiler #1 and Boiler #3 will share a common fuel oil storage tank. Therefore, IP Auburn shall fire residual oil with a sulfur content not to exceed 0.5% by weight, and distillate oil with a sulfur content not to exceed 0.35% by weight, in both boilers, following the start-up of Boiler #3.

The following replaces Condition (17) of License A-461-71-D-T/R:

- (17) Boilers #1 and #3 shall each not exceed the following emission limits, based on the firing of 500,000 gallons per year of #6 fuel oil and 500 MMScf per year of natural gas on a 12-month rolling total.

Emission Limits for Boilers #1 and #3 Firing Fuel Oil

Fuel Type	Boiler #1*		Boiler #1*		Boiler #3		Boiler #3	
	#6 or #4 Fuel Oil, 0.5% S		#2 Fuel Oil, 0.35% S		#6 or #4 Fuel Oil, 0.5% S		#2 Fuel Oil, 0.35% S	
	lb/MMBtu	lb/hr	Lb/MMBtu	lb/hr	lb/MMBtu	lb/hr	lb/MMBtu	lb/hr
PM	0.2	2.09	0.12	1.26	0.12	2.51	0.12	2.51
PM₁₀	--	2.09	--	1.26	--	2.51	--	2.51
SO₂	--	5.50	--	3.69	--	11.0	--	7.38
NO_x	--	5.23	--	3.66	--	10.5	--	7.32
CO	--	0.35	--	0.35	--	1.57	--	0.11
VOC	--	0.02	--	0.02	--	0.73	--	0.01

*These limits for Boiler #1 shall not take effect until Boiler #3 is installed.

Emission Limits for Boiler #3 Firing Natural Gas

	lb/MMBtu	lb/hr
PM	0.05	1.05
PM₁₀	--	1.05
SO₂	--	0.021
NO_x	--	1.67
CO	--	3.14
VOC	--	0.335

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The following replaces Condition (18) of License A-461-71-D-T/R:

- (18) Visible emissions from Boilers #1 and #3 while firing fuel oil shall each not exceed 30% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in a 3-hour period.

The following replaces Condition (19) of License A-461-71-D-T/R:

- (19) Visible emissions from Boiler #3 while firing natural gas shall not exceed 10% on a six-minute block average basis.

The following replaces Condition (20) of License A-461-71-D-T/R

- (20) IP shall not exceed a total facility fuel use limit of 500,000 gallons per year of #6 fuel oil, (including specification waste oil and mineral spirits), on a 12-month rolling total basis. IP shall not exceed 500×10^6 scf of natural gas on a 12-month rolling total.

The following are new Conditions:

(30) NSPS Requirements

Boiler #3 is subject to Federal New Source Performance Standards, Subpart Dc. IP shall comply with all requirements of 40 CFR Part 60, Subpart Dc including, but not limited to, the following:

- (i) IP shall submit notification to EPA of the date of construction, anticipated start-up, and actual start-up. This notification shall include the design heat input capacity of the boilers and the type of fuel to be combusted.
- (ii) IP shall perform and submit to EPA and the Department an initial performance test within 30 days after achieving the maximum production rate at which the facility will be operated but not later than 180 days after the initial start-up of the facility. The performance test shall consist of fuel supplier certification of the sulfur content of the fuel fired in Boilers #3. The fuel supplier certification must contain the following:

(a) For residual oil:

- 1. Name of the oil supplier;
- 2. The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from the oil in storage at the oil supplier's, oil refiner's facility, or other location;
- 3. The sulfur content of the oil from which the shipment came (or of the shipment itself); and
- 4. The method used to determine the sulfur content of the oil.

(b) For distillate oil:

- 1. Name of the oil supplier; and,
- 2. A statement from the oil supplier that the oil complies with the specifications for fuel oil numbers 1 or 2, as defined by ASTM D396-78.

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- (iii) IP shall submit to the Department and EPA the performance test data from the initial performance tests and any subsequent tests.
- (iv) IP shall record and maintain records of the amounts of fuel combusted during each day.
- (v) IP shall submit to EPA and the Department a Fuel Oil Sulfur Content report semi-annually. These reports are due within 30 days of the end of the 6-month period. The Fuel Oil Sulfur Content report shall contain the following information:
 - (a) Calendar dates covered in the reporting period;
 - (b) Records of fuel supplier certification;
 - (c) A certified statement signed by a responsible official, that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the reporting period.
- (vi) The following address for EPA shall be used for any reports or notifications required to be copied to them:

Compliance Clerk
USEPA Region 1
1 Congress Street
Suite 1100
Boston, MA 02114-2023

(31) Annual Emission Statement

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department by September 1, the information necessary to accurately update the State's emission inventory by means of:

- (i) A computer program and accompanying instructions supplied by the Department; or,
- (ii) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator

Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

Phone: (207) 287-2437

- (32)** IP shall pay the annual air emission license fee within 30 days of September 30 of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

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(33) This amendment shall expire concurrently with Air Emission License A-461-71-D-T/R.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: January 24, 2003

Date of application acceptance: January 30, 2003

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.